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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
07/968,209	10/29/92	HUMMEL	J 10-1420

EXAMINER
HAIL, J

B4M1/0907

WATTS, HOFFMANN, FISHER & HEINKE CO.
100 ERIEVIEW PLAZA, SUITE 2850
CLEVELAND, OH 44114-1824

ART UNIT	PAPER NUMBER
2405	9

DATE MAILED: 09/07/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 7/13/94 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claims 1-36 are pending in the application.
   Of the above, claims 4,7-10,13,14,19-24 and 27-34 are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-3,5,6,11,12,15-18,25,26,35 and 36 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Election/Restriction

Claims 4, 7-10, 13, 14, 19-24 and 27-34 withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b) as being drawn to a nonelected species. Election was made **without** traverse in Paper No. 4. Note that the species illustrated in figure 1 and described on page 9, line 25 to page 11, line 17 do not describe the use of a yarn having a tenacity greater than 10 grams per denier for one of the first and second wrappings.

Note that claims 7-10 are drawn to a separate nonelected and non-illustrated figure in which one of the wrapping layers is formed of a synthetic fiber having a tenacity greater than 10 or 20 grams per denier. Dependent claims will be allowed together with the allowance of a parent generic claim. For example, if claim 1 were allowed claims 7-10 would also be allowed because they depend upon an allowable generic claim.

Claim Rejections - 35 USC § 112

Claims 7-10 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims are not readable on the elected species illustrated in figure 1 and described on page 9, line 25 to page 11, line 17. This elected embodiment does not disclose a layer being formed of a synthetic material having a tenacity greater than 10 or 20 grams per denier.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-3, 5, 6, 11, 12, 15-18, 25, 26, 35 and 36 are rejected under 35 U.S.C. § 103 as being unpatentable over Bettcher ('251) in view of Robins et al. Bettcher ('251) discloses a cut resistant yarn as that claimed by the applicant with the exception of disclosing the use of Kevlar for the core fiber component and the first wrapping layer. Robins et al disclose a cut resistant yarn utilizing either Kevlar or Vectran liquid crystal polymer fiber. It would have been obvious to one of ordinary skill in the art to exchange the Kevlar in both the core and the first layer in Bettcher ('251) for Vectran liquid crystal polymer fiber in view of Robins et al so that the yarn produced may have a greater cut resistance as well as other property improvements. Note that the liquid crystal polymer disclosed in Robins et al would inherently possess the property of a tenacity which is no

more than 10 grams per denier. If however, the liquid crystal such as Vectran does not inherently possess the property of having a tenacity of no greater than 10 grams per denier, it would have been obvious to select the type of Vectran M fiber which does have this property as a matter of engineering choice of materials having known properties depending upon the cost and properties desired in the final product produced from the yarn.

Response to Amendment

Applicant's arguments filed July 13, 1994 have been fully considered but they are not deemed to be persuasive. Applicant argues that there was no reason stated to explain why it would have been obvious to substitute the Vectran of Robbins et al for the Kevlar in Bettcher. However, the suggestion given above was so that the yarn produced may will have a greater cut resistance as well as other property improvements. Applicant argues that there was no motivation given to support the substitution of Vectran M for high strength aramid fibers used in Bettcher. However, the reasons stated above was that the substitution would have been obvious as a matter of engineering choice of materials having known properties depending upon the cost and properties desired in the final product produced from the yarn. Therefore, if a tougher and more cut resistant product is desired then it would have been obvious to for the yarn of higher tenacity materials, and if less strength is necessary and a softer more comfortable product is desired then it

would have been well within the skill of one of ordinary skill in the art to form the yarn of materials having a lesser tenacity and a softer hand. The materials chosen would be dependent upon the desired cost and end properties necessary and desired in the final product formed from the product yarn.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph J. Hail III whose telephone number is (703) 308-2687.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0771.

JOSEPH J. HAIL III
PRIMARY EXAMINER
ART UNIT 2405

jjh,8
September 2, 1994